

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claims 2, 12, 22, 26 and 29 are requested to be cancelled.

Claims 7, 10, and 17 are currently being amended.

After amending the claims as set forth above, Claims 1, 3-11, 13-21, 23-25, and 27-28 and 30-36 are now pending in this application.

Allowable Subject Matter

Examiner indicated in Item 9 of the Office Action that Claims 30-36 (as previously and currently presented) are allowable. Applicant thanks Examiner for such acknowledgement.

The Examiner objected to informalities in Claims 7, 17 and 29. Moreover, in Item 11 of the Office Action, the Examiner indicated that Claims 7-11, 13-21, 23-25, 27, and 28, though objected to because of informalities, would be allowable if informalities were corrected. Claims 7 and 17 (and their progeny) have been amended accordingly. Therefore, it is believed that Claims 7-11, 13-21, 23-25, 27, and 28 are allowable and it is respectfully requested that the claims be allowed.

Claims 7-11, 13-21, 23-25, 27, 28, and 30-36 are now believed to be in condition for allowance.

Rejections under 35 U.S.C. § 103

In Items 5-8 of the Office Action, Claims 1, 4, and 5 were rejected as being unpatentable over Carpenter et al. (6,275,958) in view of Hemena et al. (6,160,386) and Mitchell (4,412,277).¹

Claim 1 (and its progeny) recite a DC/DC voltage converter with a number, n, of cells connected in parallel, “each cell further [having] a single protection transistor disposed in [the] second circuit branch and associated with a protection management unit for taking [the] cell out of service independently of the other cells”. According to the Examiner Carpenter et al. do not teach a single protection transistor. The Examiner offers the teachings with respect to Hemena et al. of a parallel power system which includes a voltage regulation module with a “single protection transistor (102)”. The Examiner argues that it would have been obvious to one of ordinary skill in the art, at the time of the invention, to build a DC/DC converter using cells comprising a single protection transistor in order to reduce the number of parts and cost.

However, Claim 1 additionally recites the location of the single protection transistor with respect to a second circuit branch. Claim 1 recites that the second circuit branch includes an inductor and interconnects the first and second positive terminals. Hemena et al. teach the inclusion of a transistor 108 in a separate circuit branch than the inductor 114. *See* Figure 3B of the Hemena reference which is reproduced below for illustrative purposes only. Hemena et al. do not teach a single protection transistor disposed in a circuit branch including an inductor and interconnecting the first and second positive terminals as recited in Applicant’s Claim 1.

¹ A proper rejection under 35 U.S.C. § 103(a) requires that the Examiner establish *prima facie* obviousness. As recited in the MPEP, “[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.” MPEP § 2142. Three basic criteria must be met to establish *prima facie* obviousness. MPEP § 2143. First, there must be some suggestion or motivation to modify a reference or combine teachings. *Id.* Second, there must be reasonable expectation of success. *Id.* Third, the prior art reference or references must teach or suggest all the claim limitations. *Id.*

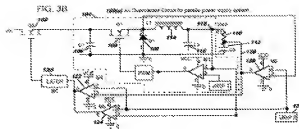


FIGURE 3B OF HEMENA

For a § 103 rejection to be appropriate the Examiner must establish a prima facie case of obviousness, including the teaching or suggestion of each claim limitation. Since the Examiner has not done so with respect to Claim 1, it is respectfully requested that the rejection be withdrawn and Claim 1 (and its progeny) be allowed.

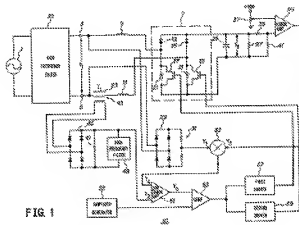


FIGURE 1 OF MITCHELL

Claim 1 further recites, a protection transistor is connected “in series” in the second circuit branch of the cell between the inductor and a second positive terminal, and an intrinsic diode connected to the inductor by its cathode and to the second positive terminal by its anode. The Examiner states that Mitchell is drawn to an AC/DC converter and discloses a MOS transistor 17 connected in series with an inductor 9 and an intrinsic diode 21 connected to the inductor by its cathode. However, both MOS transistors 17 and 19 of Mitchell are part of the

rectifier 7 and are connected in such a way that they cannot perform any protective function. For example, while the protective MOS transistor presented by Applicant is connected *in series* with an inductor, the MOS transistor 17 of Mitchell is connected *in parallel* with the diode with respect to the inductor. *See* Figure 1 which is reproduced above for illustrative purposes only. Accordingly, the converters presented in the Mitchell and Carpenter references are incompatible. Not only is there a lack of motivation to combine the two references but the references teach away from their pairing as their combination would not be successful. Moreover, Mitchell et al. teach of an AC/DC converter not a DC/DC converter as recited in Claim 1. Since the provided references teach away from their combination and there is no evidence of a suggestion or motivation to combine the two within the presented references it is respectfully requested that the rejection of Claim 1 be withdrawn and Claim 1 be allowed to issue.

Claims 4 and 5 are allowable for at least the reasons articulated with respect to Claim 1. Therefore, it is respectfully requested that the rejection of Claims 4 and 5 fail and they be allowed.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37

C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

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